

APPENDIX

1. (Twice Amended) A ~~matrix type~~ display device comprising ~~an~~:

~~a display substrate;~~

~~an optical material selectively arranged at predetermined positions on an object comprising a the display substrate, the predetermined positions being defined by features of which repellency to the optical material in one of a being liquid or a liquid precursor of the optical material is substantially different from that of peripheries of the features. at least during coating at the predetermined positions; and~~

~~surface features formed on the display substrate that cause the optimal material to remain at the predetermined positions.~~

2. (Twice Amended) A method of manufacturing a ~~matrix type~~ display device ~~comprising an optical material selectively arranged at predetermined positions on a display substrate, the optical material being liquid at least during coating at the predetermined positions, the method comprising the steps of:~~

~~forming surface features of which repellency to an optical material in one of a liquid or a liquid precursor of the optical material is substantially different from that of peripheries of the features so that the features define predetermined positions at a surface of an object comprising a display substrate at each of the predetermined positions on the display substrate; and~~

~~applying coating the liquid optical material or the liquid precursor to at the predetermined positions, the surface where the features are formed causing the liquid optical material to remain at the predetermined positions.~~

3. (Twice Amended) The method of manufacturing a ~~matrix type~~ display device according to Claim 2, wherein: the features are recesses that are less repellent to the optical material in liquid or the liquid precursor, compared to the peripheries of the recesses
~~each surface feature defines a concave shape in which a surface at each of the predetermined positions is lower than a periphery of the predetermined positions; and~~
the liquid optical material is disposed ~~coated~~ at the predetermined positions by a process including application of the optical material of the liquid precursor to the surface having recesses, with ~~a side of the display substrate having~~ the surface features facing upward. -

4. (Twice Amended) The method of manufacturing a ~~matrix type~~ display device according to Claim 2, wherein: the features are projections that are less repellent to the optical material in liquid or the liquid precursor, compared to the peripheries of the projections

~~each surface feature defines a convex shape in which a surface at each of the predetermined positions is higher than a periphery of the predetermined positions; and~~
the liquid optical material is disposed ~~coated~~ at the predetermined positions by a process including application of the optical material or the liquid precursor to ~~with a side of the display substrate having~~ the surface having projections, with the surface features facing downward.

5. (Twice Amended) A method of manufacturing a ~~matrix type~~ display device ~~comprising an optical material selectively arranged at predetermined positions on a display substrate, the optical material being liquid at least during coating at the predetermined positions~~, the method comprising the steps of:

forming a plurality of first bus lines on a first object comprising a~~the~~ display substrate;

~~forming surface features of which repellency to an optical material in one of a liquid or a liquid precursor of the optical material is different from that of the peripheries of the features so that the features define at each of the predetermined positions at a surface of a second object including the first object on the display substrate;~~

~~applying coating the liquid optical material or the liquid precursor to the surface of the second object having the features at the predetermined positions, the surface features causing the liquid optical material to remain at the predetermined positions; and~~

forming a plurality of second bus lines ~~transverse to the first bus lines over the second object coated by the~~ optical material or the liquid precursor.

6. (Twice Amended) A method of manufacturing a ~~matrix type~~ display device ~~comprising an optical material selectively arranged at predetermined positions on a display substrate, the optical material being liquid at least during coating at the predetermined positions,~~ the method comprising the steps of:

forming a plurality of first bus lines on a first object comprising a~~the~~ display substrate;

~~forming surface features defining at each of the predetermined positions at a surface of a second object including the first object on the display substrate;~~

~~applying one of an coating the liquid optical material or a precursor of the optical material to at the predetermined positions, the surface of the second object features causing the liquid optical material to remain at the predetermined positions;~~

forming a layer to be transferred, including a plurality of second bus lines,
~~plurality of second bus lines on a peeling substrate through a peeling layer; and~~

transferring the layer to be transferred onto the second object coated by the optical material or the precursor structure, including the second bus lines, peeled off from the peeling layer on the peeling substrate onto the display substrate coated with the optical material so that the first bus lines cross the second bus lines.

7. (Twice Amended) A method of manufacturing a ~~matrix type~~ display device ~~comprising an optical material selectively arranged at predetermined positions on a display substrate, the optical material being liquid at least during coating at the predetermined positions~~, the method comprising the steps of:

~~forming, on the display substrate, wiring including a plurality of scanning lines and signal lines, pixel electrodes respectively corresponding to the predetermined positions, and switching elements for controlling states of the pixel electrodes in accordance with a state of the wiring;~~

~~forming surface features of which repellancy to an optical material in one of a liquid or a liquid precursor of the optical material is different from that of peripheries of the features so that the features define at each of the predetermined positions at a surface of an object including a on the display substrate; and~~

~~applying coating the liquid optical material or the liquid precursor to the surface of the object having features at the predetermined positions, the surface feature causing the liquid optical material to remain at the predetermined positions.~~

8. (Twice Amended) A method of manufacturing a ~~matrix type~~ display device ~~comprising an optical material selectively arranged at predetermined positions on a display substrate, the optical material being liquid at least during coating at the predetermined positions~~, the method comprising the steps of:

disposing one of an optical material or a precursor of the optical material at forming surface features at each of the predetermined positions defined by features formed on an object including a~~on the~~ display substrate;

~~coating the liquid optical material at the predetermined positions, the surface features causing the liquid optical material to remain at the predetermined positions;~~

forming a layer to be transferred~~wiring~~, including a plurality of scanning lines and signal lines, pixel electrodes ~~respectively corresponding to the predetermined positions,~~ and switching elements, for controlling states of the pixel electrodes ~~in accordance with a state of the wiring,~~ on a peeling layer formed on~~substrate through~~ a peeling substrate~~layer~~; and

~~transferring a structure peeled off from the peeling layer~~ to be transferred onto the object coated by the optical material or the precursor on the peeling substrate onto the display substrate.

9. (Twice Amended) The method of manufacturing a ~~matrix type~~ display device according to Claim 25, wherein:

~~the surface features comprise the first bus lines and define a concave shape in which a surface at each of the predetermined positions is lower than a periphery thereof; and~~

~~in the step of coating the liquid optical material, the liquid optical material is coated at the predetermined positions with a side of the display substrate to be coated with the liquid optical material facing upward.~~

10. (Twice Amended) The method of manufacturing a ~~matrix type~~ display device according to Claim 27, wherein :

~~the surface features comprise the wiring including a plurality of scanning lines or signal lines and define a concave shape in which a surface at each of the predetermined positions is lower than a periphery thereof; and~~

~~in the step of coating the liquid optical material, the liquid optical material is coated at the predetermined positions with a side of the display substrate to be coated with the liquid optical material facing upward.~~

11. (Twice Amended) The method of manufacturing a ~~matrix type~~ display device according to Claim ~~27~~, wherein ÷

~~the surface features comprise the pixel electrodes and define a convex shape in which a surface at each of the predetermined positions is higher than a periphery thereof; and~~

~~in the step of coating the liquid optical material, the liquid optical material is coated at the predetermined positions with a side of the display substrate to be coated with the liquid optical material facing downward.~~

12. (Twice Amended) The method of manufacturing a ~~matrix type~~ display device according to Claim ~~25~~, wherein the features comprise~~further comprising the steps of forming~~ an interlayer insulation film;

~~wherein the surface features comprise the insulation film and define a concave shape in which a surface at each of the predetermined positions is lower than a periphery thereof; and~~

~~in the step of coating the liquid optical material, the liquid optical material is coated at the predetermined positions with a side of the display substrate to be coated with the liquid optical material facing upward.~~

13. (Twice Amended) The method of manufacturing a ~~matrix type~~ display device according to Claim ~~25~~, wherein the features comprise~~further comprising the steps of forming~~ a light shielding layer;
~~wherein the surface features comprise the light shielding layer and define a concave shape in which a surface at each of the predetermined positions is lower than a periphery thereof; and~~
~~in the step of coating the liquid optical material, the liquid optical material is coated at the predetermined positions with a side of the display substrate to be coated with the liquid optical material facing upward.~~

14. (Twice Amended) The method of manufacturing a ~~matrix type~~ display device according to claim 2, wherein, in the step of forming surface features, the surface features are formed by application of coating a liquid material in liquid followed by removal of and then selectively removing the coated liquid material.

15. (Twice Amended) The method of manufacturing a ~~matrix type~~ display device according to claim 2, further comprising the steps of:~~wherein the surface features are formed on a peeling substrate through a peeling layer in the step of forming surface features, and then a structure peeled off from the peeling layer on the peeling substrate is transferred onto the substrate~~

forming a layer to be transferred including the features on a peeling layer disposed on a peeling substrate in the step of forming the features; and

transferring the layer to be transferred onto the coated display substrate or the display substrate.

16. (Twice Amended) The method of manufacturing a ~~matrix-type~~ display device according to claim 2, wherein a height d_r of the surface features satisfies the following equation (1):

$$d_a < d_r$$

d_a is a thickness of a single coat of the liquid optical material.

17. (Twice Amended) The method of manufacturing a ~~matrix-type~~ display device according to Claim 16, wherein following equation (2) is satisfied:

$$V_d / (d_b \bullet r) > E_t$$

V_d is a driving voltage applied to the optical material;

d_b is a total thickness of the liquid optical material coated;

r is a concentration of the liquid optical material; and

E_t is a minimum electric field strength (threshold electric field strength) at which a change in optical properties if the liquid optical material occurs.

18. (Twice Amended) The method of manufacturing a ~~matrix-type~~ display device according to claim 2, wherein following equation (3) is satisfied:

$$d_f = d_r$$

wherein:

d_f is a thickness of the optical material at the time of completion; and

d_r is a height of the surface features.

19. (Twice Amended) The method of manufacturing a ~~matrix-type~~ display device according to claim 18, wherein following equation (4) is satisfied:

$$V_d / d_f > E_t$$

V_d is a driving voltage applied to the optical material; and

E_t is a minimum electric field strength (threshold electric field strength) at which a change in optical properties of the liquid optical material occurs.